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Pesticide-laden prey killing birds

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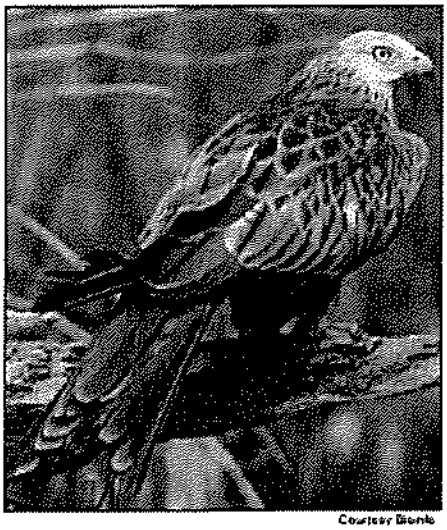

Courtesy Biomic

Out of 10 fledgling red kites that left their nests last year in the Midlands, seven died.

In an ironic twist, rats, mice and other rodents may be indirectly responsible for killing the predators that hunt them, according to an article in the Jan. 23 issue of New Scientist magazine.

Predatory birds and mammals in Britain are dying from ingesting rodents that have high levels of pesticides in their bodies. Because rats and mice have become increasingly resistant to the poisons designed to kill them, they have become a threat to their predators.

Researchers at the Institute of Terrestrial Ecology in Monk's Wood, Huntingdon, Britain, found that the proportion of barn owls found with anticoagulant rodenticides in their livers increased from five percent in 1983-84 to 36 percent in 1995-96. The figures are based on autopsies of 717 dead barn owls found all over Britain over the period. About half of them were killed by cars. In the same study, Richard Shore of the ITE found that nine out of 29 dead polecats collected between 1992 and 1994 contained rat poison. The findings will be published later this year in Advances in Vertebrate Pest Management.

The rodenticides had killed only five percent of the poisoned owls, and none of the polecats. However, authors Ian Newton and colleagues stress that the true mortality may be higher. They say that when animals succumb to the poisons they become lethargic, and tend to settle and die in woodland or some other concealed place where they are unlikely to be found.

Ken Wildey of the agriculture ministry's Central Science Laboratory in York warns that rodenticide-resistant rats and mice are a threat to many species, from domestic dogs and cats to foxes, weasels, stoats and birds of prey. It is a problem in many countries. "Resistance is rising worldwide," says Newton.

The first anticoagulant poisons, which work by knocking out the blood's clotting mechanism, were introduced in the 1950s. They accumulate in a rodent's body until a lethal dose is reached and the animal dies of internal bleeding. But most

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rats are now resistant to first-generation anticoagulants such as warfarin. Many are also resistant to the second-generation poisons such as difenacoum and bromadialone, which are more toxic. These chemicals also stay in the body longer, making it more likely that rodents will accumulate enough of these chemicals to poison predators.

The threat to rare birds of prey is especially worrying. Out of 10 fledgling red kites that left their nests last year in the Midlands, seven died. An autopsy on the only corpse that was recovered showed that it had been poisoned by bromadialone after eating a rodent. In May, an adult red kite in the Chiltern Hills, northwest of London, was killed by brodifacoum, an anticoagulant so toxic that it is only licensed in Britain for indoor use. Another adult kite found dead last November in the Chilterns is also thought to have been poisoned.

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"We think this is potentially a huge problem," says Ian Carter, who leads the red kite recovery program run by English Nature, the government's conservation agency. "Kites are scavengers, so they will be selecting dead or dying prey and they are more likely to eat rats with high rodenticide loadings than barn owls, which take live prey."

Adrian Meyer, a rodent control consultant based in Newbury, Berkshire, sees no easy way out. "In some areas, rodenticide resistance has got to the point where the poisons licensed for outdoor use no longer work, and it is only human nature to use something else that does work," he says. Meyer claims that the Ministry of Agriculture, Fisheries and Food appears to have no coherent strategy to deal with the resistance problem.

For more information, contact Claire Bowles, New Scientist Magazine, email: claire.bowles@rbi.co.uk.

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